

# Synergy Control Installation and Configuration Guide

Synergy CONTROL v3.0

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# Introduction

## About Synergy CONTROL

Video meetings & Video conferences have many advantages over standard "face-to-face" meetings however they generally require extra attention from IT or technical staff.

One of many repeating scenarios when administrators need to help employees is when a participant is having problems joining a video meeting. Another good example is when all participants should mute their microphones while watching a presentation but some of them forget to do so.

These are just two examples of many situations that can occur while video meetings are taking place. Sometimes it is necessary to invite participants to an upcoming meeting before it starts, or you may need to compare a list of all connected participants in an ongoing meeting with a list of participants who have been invited to a specific meeting.

We think that it is convenient, efficient and more so necessary for large organizations to have a tool where video meeting administrators have the ability to have full control of all meetings whether they are ad-hoc or scheduled (both active and inactive) and can react promptly on any required actions or changes.

We present Synergy Control, the tool which supports both Pexip Infinity and CMS technologies where you can have control over all of your meetings in a very simple and effective manner.

# How Synergy CONTROL Works

This section explains how the software works and gives a short overview of the implemented features.

## Feature Overview

Synergy Control supports the following feature set:

- View all active meetings, both ad-hoc and scheduled, on Pexip Infinity and CMS multi-conference units.
- View all inactive pre-scheduled meetings. (only with Synergy JOIN integration)
- Search for scheduled and ad-hoc meetings with meeting name, participant name, email or meeting start date. For active meetings it is possible to search meetings that have already started within the given time frame
- Create a list of 'Favorite' meetings to follow. This includes both 'ad-hoc' and 'scheduled' meetings (active and inactive).
- Adding participant(s) to an active meeting by initiating a dial-out from the MCU
- Send or resend dial-in info to participants in a scheduled meeting by using their email address (only with Synergy JOIN integration)
- Control participant's sound, microphone and video, including group controls for all participants.
- Disconnect participants.
- View video meeting start time & duration
- View total number of participants attending the meeting in a video meeting room (this feature only works if the endpoint has people counter technology).
- Get information about packet loss, jitter and bandwidth for every participant.
- Meeting locking. This makes it possible to lock a meeting and prevent unwanted parties attending the meeting (there are some differences in functionality between CMS and Pexip Infinity )

## Installation Prerequisites

Synergy CONTROL 3.0 is only compatible with Synergy JOIN 4.0 and above.

Synergy CONTROL 2.2 is compatible with Synergy JOIN 3.0 and 3.2

## Windows Server Software

Operating System	Additional Features Required
Operating System: Windows Server 2008 r2 64 bit (or newer)	Microsoft .NET Core 2.x

## Windows Server hardware

CPU	RAM	HDD
4 Cores	8 GB	20 GB

## Device Support

Software	Version
Cisco Meeting Server	2.4
Pexip Infinity	19
Synergy JOIN	3.0

## Supported Internet Browsers

Software	Version
Google Chrome	65.0.3325
Mozilla Firefox	61.01

For the best experience with CONTROL, we recommend using Google Chrome or Mozilla Firefox browsers. All newer versions of internet browsers should also work.

## Network requirements

Source	Destination	Protocol	Port (TCP unless otherwise stated)	Description
CONTROL	84.22.108.36/32	HTTP (S)/80,443	TCP	Software upgrades
JOIN	CONTROL	HTTP (S)/80,443	TCP	Retrieve meeting data from Synergy JOIN
Pexip Infinity	CONTROL	HTTPS, 443	TCP	Retrieving call data from the MCU
Cisco Meeting Server	CONTROL	HTTPS, 443	TCP	Retrieving call data from the MCU

## Limitations

There are some limitations in Pexip Infinity and Cisco Meeting Server itself when it comes to active meeting controls. Some of these limitations are overcome by the integration of Synergy JOIN (if integration is conducted) but direct controls related to participants are still dependent on API possibilities of the supported technologies.

Technology	Mute/Unmute Microphone	Mute/ Unmute Video	Mute/ Unmute Sound	Disconnect Participant	Meeting Locking
Pexip Infinity	Yes	No	No	Yes	Yes
Cisco Meeting Server	Yes	Yes	Yes	Yes	Yes (1.)

**(1.)** In order to get Meeting Locking working properly on CISCO systems it is necessary to distinguish between host and guest calls to a VMR (or co-space). It is important to setup "guest" and "host" accounts where for a guest the 'needsActivation' parameter has to be set. Refer to the Cisco CMS documentation for more information on how to set this

**(2.)** If you are going to be using **Synergy CONTROL** alongside **Synergy JOIN**, the server that has got Synergy JOIN installed should not have the IIS service running or installed. By default, the Synergy JOIN API runs on port 443 and if your IIS server is using port 443 for another website, the Synergy JOIN API will not be able to communicate with Synergy CONTROL.

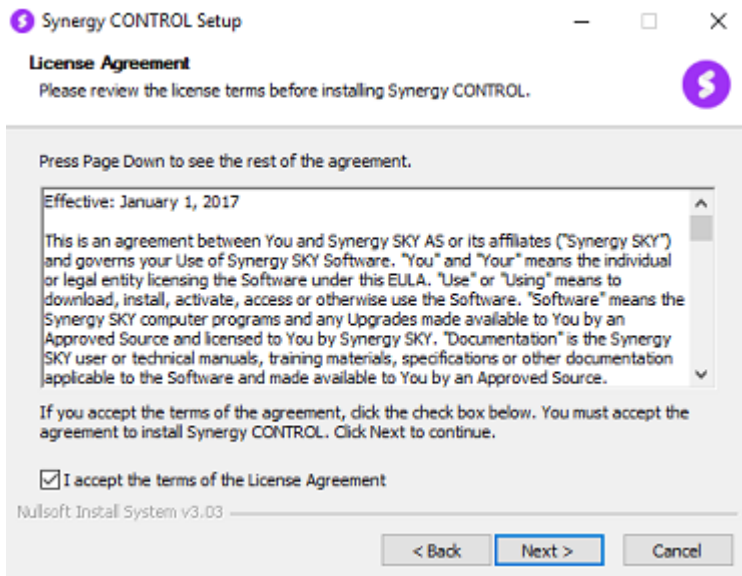
## Installing Synergy CONTROL

You will be provided with an installer: SynergyControl\_Setup.exe

1. Double click to run the installer.



2. Follow the install wizard. Click next to accept the license agreement, select the install location, and choose whether to launch CONTROL when the installation completes.



3. Once the install has completed, you will see a shortcut to the Synergy CONTROL application on the desktop.



## Configuring Synergy CONTROL

All configuration of Synergy CONTROL is done from the server the application is hosted on. Access to the configuration page is prohibited, unless you are logged on to the host server. The server will only listen to "localhost" by default. If you would like to change the configuration, you can click on the configuration button in the top right corner of the application or browse to [http://localhost:\(port\)/Config](http://localhost:(port)/Config)



Above is the button you will have to click on to access configuration the configuration page (when you are logged on to the host server)



## Licensing

The first time you install Synergy CONTROL , it will run in Demo mode. Demo mode will only present the first two meetings that are present in your MCU (when viewing Active Meetings) and will only present the next two scheduled meetings (when a connection has been established with your Synergy JOIN installation).

**Licensing**

**Get machine ID**

(please use this ID when applying for "offline" license key)

Product license API key

License key

```
jksjf
s;afsjfskjf;dsklfo9483204234lkrjweir8254jklwe
jrwur09249024ewjr9084092rijwdfjslkfj;lsajfdw
fa032094a'\wer85wsjflsdjfasriwe[trurjgfdskafskd|
```

In order to get valid license key the video administrator has two options:

### 1.API Key

Once you have been provided with an API key, paste this into the Product license API Key section. Synergy CONTROL will fetch a new License key from the licensing server. The license key will be retrieved and placed into the License Key section. The license key refreshes itself every 14 days therefore CONTROL requires access to the Internet in order for the license key to stay active.

### 2. License Key

To obtain an offline license key you will have to get in touch with your Synergy SKY representative or send a request Synergy Sky Support (support@synergysky.com).

You will have to provide the Machine ID of the hosting server. This can be found within the configuration page by pressing the 'Get machine ID' button. Once we have the machine ID, we will provide you with a License Key you can paste in to the Licensing tool.

## Software Updates

Information about new software releases including Beta versions will be displayed on the configuration page. Administrator can view release notes as well as download and install (or just download) the newest versions.

Alerts for new software releases will be displayed on the client side (browsers) too. This can be removed by choosing the option 'Remove new version warning' on the configuration page. The warning will stay hidden until a new version of the software is available.

## Software update

New software version is available!

Get update



Just download, **do not** start installation

Release notes



Remove new software version warning

(this refers to warning shown in client applications/browsers, not on the configuration page)

New software **BETA** version is not available yet.

Get update (Beta)



Just download, **do not** start installation

Release notes (Beta)

# Hosting and Authentication

This section provides details about configuring hosting and authentication within Synergy CONTROL.

## Hosting

The screenshot shows the 'HOSTING' configuration page. It includes the following fields and options:

- Bind to HTTP URL:**
- Enable HTTPS:**  (If set, the server will only listen on HTTPS)
- Bind to HTTPS URL:**
- Certificate location:**
- Certificate password:**  OR
- Use Windows Authentication:**
- Windows Authorization Group:**

CONTROL can be configured to be accessed via **HTTP** or **HTTPS (SSL)**. It is not possible to run a HTTP and HTTPS connection simultaneously.

**For external access, remember to open the chosen port in your firewall.**

### Enabling HTTP

To enable HTTP access to Synergy CONTROL, fill in the 'Bind to HTTP URL' box with the URL that you would like the server to be accessible from. e.g. `http://localhost:85`

If you would like the Synergy CONTROL service to listen to all network interfaces you can use `*` as the hostname, e.g. `http://*:85`.

Once you have done this, click save at the bottom of the page. The port availability will be checked before the Save option is allowed. If the chosen port is not available, a warning message will be displayed.

### Enabling HTTPS

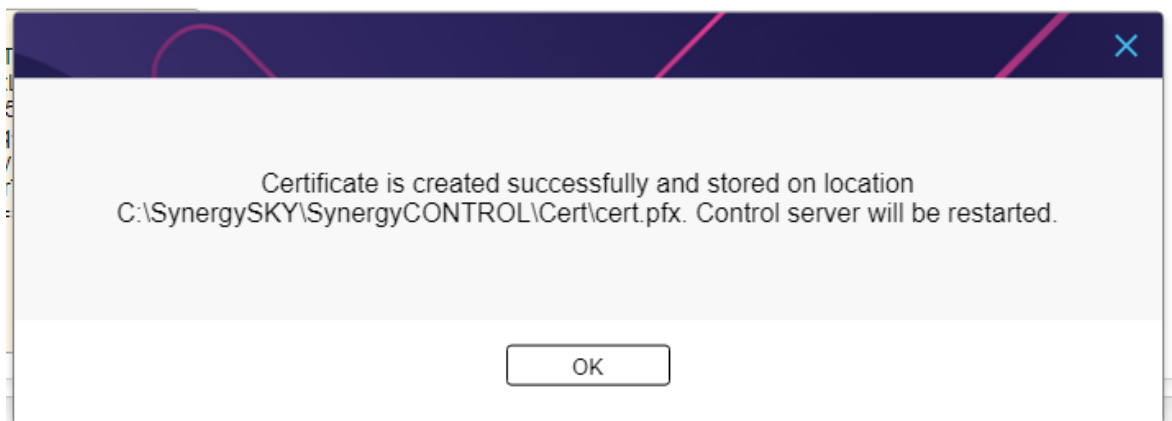
To enable HTTPS access to Synergy CONTROL, tick the 'Enable HTTPS' tickbox and fill in the 'Bind to HTTPS URL' field with the IP address that you would like the server to be accessible from e.g. `https://192.168.1.227`

**N.B** It is not possible to use the FQDN of the server in the 'Bind to HTTPS URL' field. You have to specify the IP Address of the NIC that the server is running on.

It is possible to use a self signed certificate for the HTTPS access. To do this, you will have to specify the location of the certificate (including file name) and the password for the certificate in the 'Certificate location' and 'Certificate password' text boxes. If you do not currently have a self signed certificate, the steps below show how to generate and use a certificate that is generated by Synergy CONTROL.

### Generating a Self signed certificate

Alternatively, Synergy CONTROL can generate a certificate for you by ticking the 'Generate certificate' button. When you do this, Synergy CONTROL will generate a certificate and place it in the default location (as per the below image).



You will have to paste the location where certificate has been placed into the 'certificate location' field. The password for the certificate generate by Synergy CONTROL will be prepopulated.

Once you have done this, click save at the bottom of the page. The port availability will be checked before the Save option is allowed. If the chosen port is not available, a warning message will be displayed.

**N.B** Windows authentication can not be used simultaneously with HTTPS. For security reasons we are not recommending using the Generated certificate in production.

## Authentication

Authentication to the Synergy CONTROL application is now possible via two methods. Standard Windows authentication and Microsoft Azure AD OAuth. It is not possible to run the two authentication methods simultaneously. Standard Windows authentication can be used with http. Microsoft Azure AD OAuth can only be enabled with https.

### Windows Authentication

If you want to setup access restrictions in Synergy CONTROL, tick the check box "**Use Windows Authentication**". This will allow access to anyone with a local Windows user or Active Directory user authentication.

If you would like to include more restrictions, please enter a group name in "**Authorization Group**" in the form "**DOMAIN\GroupName**" or "**SERVER\GroupName**". This can be either a local group or a group in Active Directory. Only users in this group will be allowed access to Synergy CONTROL.

### Microsoft Azure AD OAuth configuration

Use OAuth

---

**OAuth CONFIGURATION**

Synergy Control configuration for Azure AD

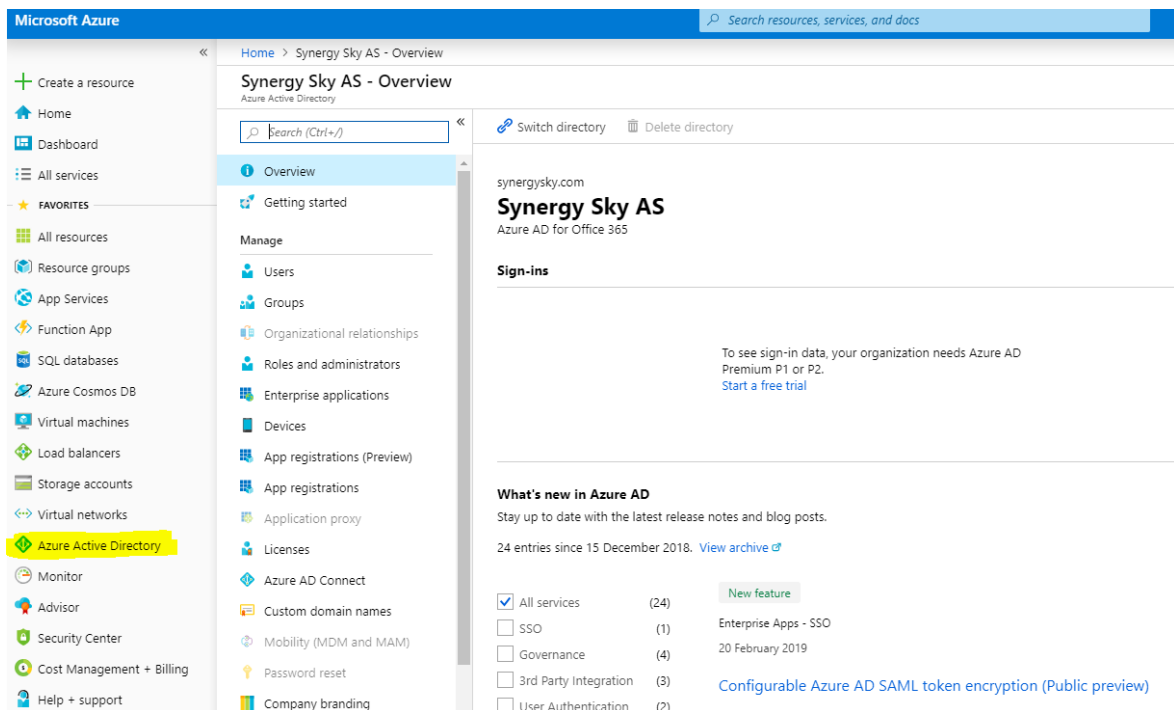
Domain	<input type="text"/>
Instance	<input type="text"/>
Tenant Id	<input type="text"/>
User group	<input type="text"/>
Client Id <small>(Application Client Id in Azure context)</small>	<input type="text"/>
Client Secret	<input type="text"/>
Redirect URI after user Login <small>(Please use the Control server URI)</small>	<input type="text"/> /auth-callback <small>(This suffix will be added automatically! Please use full URI string in Azure configuration (e.g https://192.168.1.24/auth-callback))</small>

To enable Azure OAuth type of user authentication tick the 'Use OAuth' tick box.

Following this, you will also have to configure the OAuth Configuration settings.

Field	Description
Domain	The company domain as detailed in the Azure environment
Instance	The URL for where AzureAD connects to for authentication. By default this value is https://login.microsoftonline.com
Tenant ID	The Tenant ID for where the Synergy CONTROL application exists in AzureAD. This is detailed in the Azure Portal Application page
User Group	<b>The ID for the user group that have access to Synergy CONTROL. Not required if user group authentication is not being used</b>
Client ID	This is detailed as the 'Application (Client) ID' in the Azure Portal application page
Client Secret	Should be generated specifically for the Synergy CONTROL application registration on Azure AD portal and should not be publicly available as it will be used for API authentication
Redirect URI after user Login	We recommend settings this to be the Synergy CONTROL server (HTTP or HTTPS URI). Please note that in the case where reverse proxy is used, this URL will be different.

1. Log In to https://portal.azure.com
2. Click on Azure Active Directory
3. Select App Registrations



4. Select New Registration
5. Enter an application name and click on Register

The screenshot shows the Microsoft Azure portal interface. At the top, there is a search bar and navigation breadcrumbs: Home > Synergy Sky AS - App registrations > synergyCONTROL. The main content area displays the application's details:

- Display name: synergyCONTROL
- Application (client) ID: c6a4-42cd-4714-8b61-7f362ad3
- Directory (tenant) ID: c0fc-7083-436d-af33-387159b40
- Object ID: ee2b-1b63-4032-abf4-3802d361

Below the details, there is a section titled 'Call APIs' with a 'View API permissions' button. The left sidebar contains navigation options such as Overview, Quickstart, Manage (Branding, Authentication, Certificates & secrets, etc.), and Support + Troubleshooting.

Copy the Directory (tenant) ID in the Azure Portal. This is the Tenant ID in Synergy CONTROL

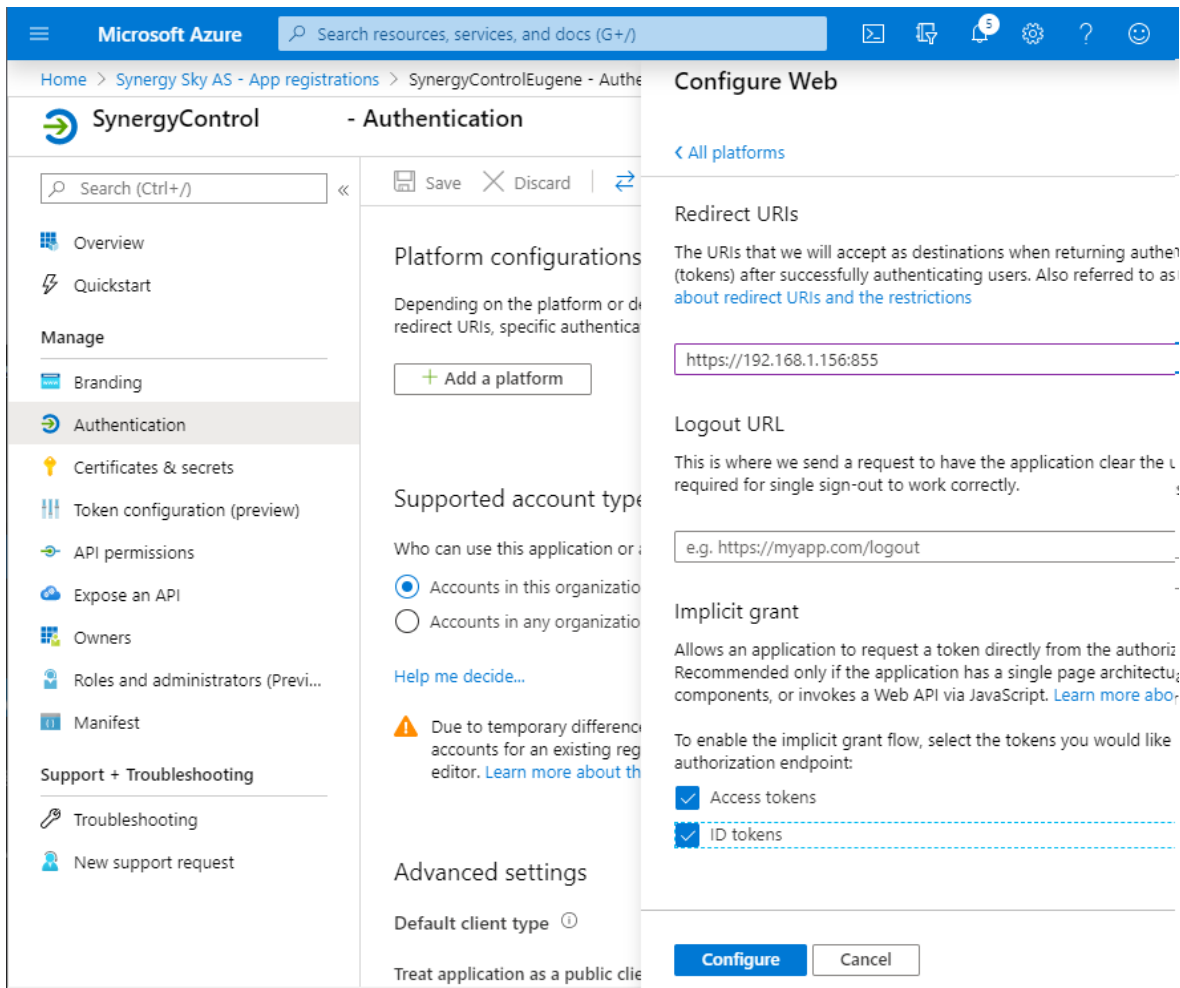
Copy the Application(client) ID in the Azure Portal. This is the Client ID Synergy CONTROL

6. Whilst you are in the App Overview, select 'Redirect URIs'.

Click on 'Add a platform' select 'Web' application and then enter the **IP Address** of the Synergy CONTROL Server including the port number.

If you have a DNS Record for the Synergy CONTROL server, we recommend that you add a second uri with the Fully Qualified Domain Name (FQDN).

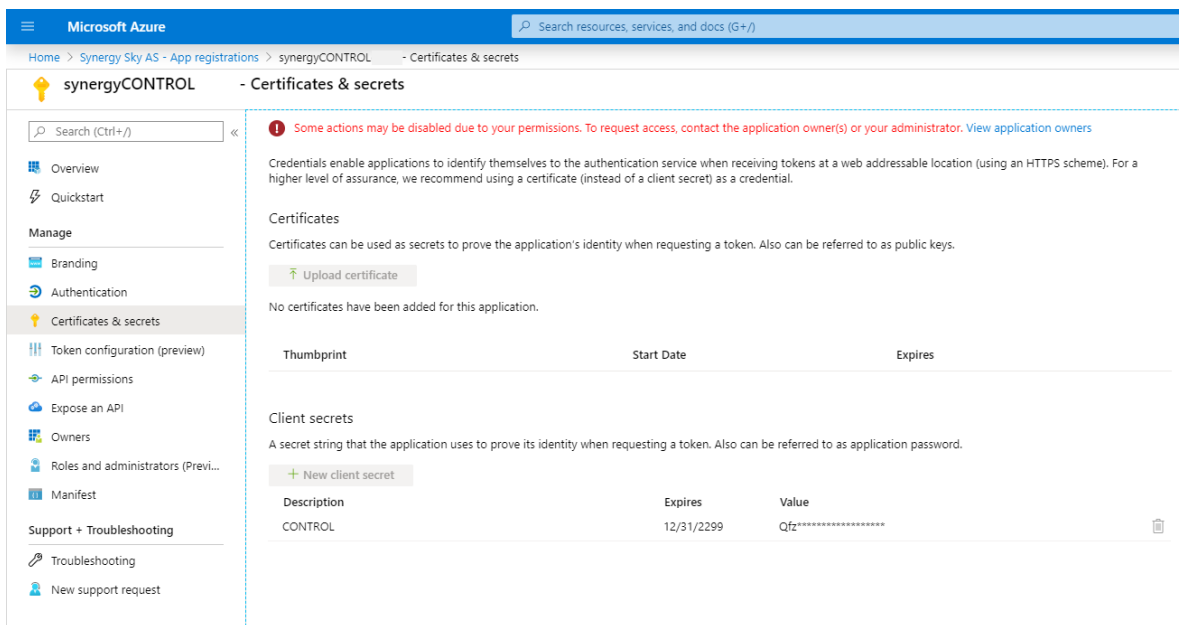
`https://<FQDN>:<portnumber>`



7. Select 'Certificates & Secrets'

8. Click 'New Client Secret' and give it a name and set it to never expire. Click on Add

Copy the Client Secret to the Synergy CONTROL 'Client Secret' field



The following section is only necessary if you are going to be configuring Group based access to Synergy CONTROL.

### 9. Select API Permissions

Click on Add a Permission, choose Microsoft Graph, **ApplicationPermissions** and create the following permission  
Directory > Directory.Read.All

Click on Add a Permission, choose Microsoft Graph, **DelegatedPermissions** and create the following permission  
User > User.Read

Search (Ctrl+/) Refresh

Overview  
Quickstart  
Manage  
Branding  
Authentication  
Certificates & secrets  
Token configuration (preview)  
API permissions  
Expose an API  
Owners  
Roles and administrators (Preview)  
Manifest  
Support + Troubleshooting  
Troubleshooting  
New support request

Configured permissions

Applications are authorized to call APIs when they are granted permissions by users/admins as part of the consent process. The list of configured permissions should include all the permissions the application needs. [Learn more about permissions and consent](#)

+ Add a permission Grant admin consent for Synergy Sky AS

API / Permissions name	Type	Description	Admin Consent Required	Status
Microsoft Graph (2)				
Directory.Read.All	Application	Read directory data	Yes	Granted for Synergy Sky ...
User.Read	Delegated	Sign in and read user profile	-	Granted for Synergy Sky ...

The permission level Directory.Read.All is used to find out which group each user exists in

Once you have configured all of the settings, click on

To enable Group Access to Synergy CONTROL a security group has to be created. This security group should contain the users that have permission to access the application.

10. Whilst you are in App Registrations, select 'Manifest' and change the following values:

```
"groupMembershipClaims": "SecurityGroup"
```

```
"oauth2AllowIdTokenImplicitFlow": true,
```

```
"oauth2AllowImplicitFlow": true,
```

11. Browse to Groups, select the Security Group that has the users that have permission to the Synergy CONTROL application

Copy the Object ID and paste this into the 'User Group' field in Synergy CONTROL



The screenshot shows the Microsoft Azure portal interface for the 'ControlAdmin' group. The breadcrumb navigation is 'Home > Synergy Sky AS > Groups - All groups > ControlAdmin'. The left-hand navigation pane includes sections for 'Overview', 'Diagnose and solve problems', 'Manage' (with sub-items: Properties, Members, Owners, Group memberships, Applications, Licenses, Azure resources), and 'Activity' (with sub-items: Access reviews, Audit logs, Bulk operation results (Preview)).

The main content area displays the group's details:

- Group Name:** ControlAdmin
- Membership type:** Assigned
- Source:** Cloud
- Type:** Security
- Object Id:** 155c52-a898-42f5-a440
- Creation date:** 10/10/2019, 10:59:10 AM

At the bottom, the 'Direct members' section shows the following counts:

- 2 User(s)
- 0 Group(s)
- 0 Device(s)
- 0 Other(s)

Hit Save at the bottom of the page. The Synergy CONTROL service will restart and any logged in users will lose their session and they will have to log in using their Office365 credentials to regain access to the application.

## JOIN API Configuration

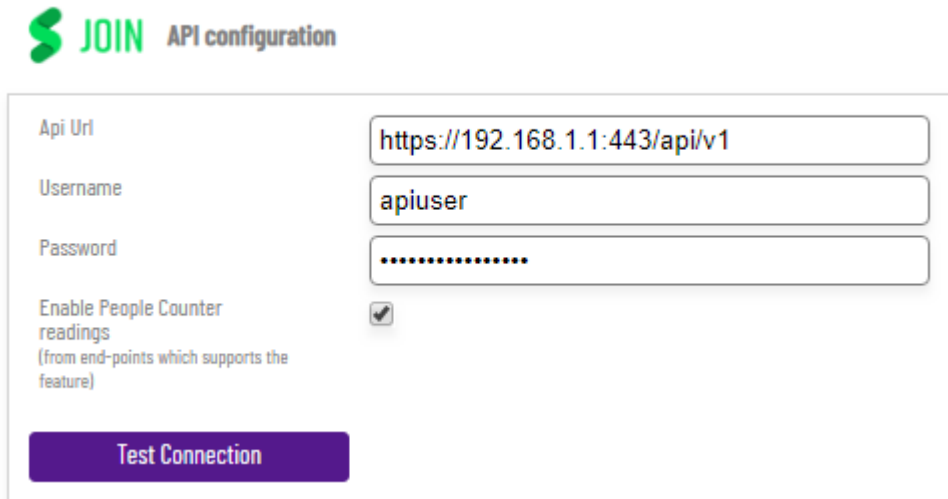
In the Synergy Join section of the configuration page you can specify the Synergy JOIN API URL, username and password, as well as enable/disable people counter readings. It is possible to see results from people counters on end-points that are registered in Synergy JOIN (depending on whether or not the device supports people count). Synergy CONTROL will automatically collect authentication information through the API and use it to sign in and monitor counter devices on end-points.

The default credentials for the Synergy JOIN API are:

username: apiuser

password: SynergySkyWord01

These values can be changed in Synergy JOIN by an administrator.



**JOIN** API configuration

Api Url

Username

Password

Enable People Counter readings (from end-points which supports the feature)

**Test Connection**

## Synergy SKY Database Configuration

With the addition of Synergy of Things, it is now possible to extract further information relating to scheduled meetings and sensor information for active meetings. You will have to enter the details below to allow for the database connection from Synergy CONTROL to Synergy JOIN

**JOIN + CONTROL DATABASE CONFIGURATION**

**DATABASE SERVER**

IP address:

Port:

Database name:

Username:

Password:

**Test Connection**

Field	Value	Description
IP address	localhost	If Synergy JOIN is installed on the same server as CONTROL, you can use localhost. If JOIN is installed on a separate server, you have to specify the IP Address e.g. 192.168.10.50
Port	5432	Port 5432 is the default port number configured in Synergy JOIN config.json file
Database Name	synergyskydb	This is the name of the database that is installed for Synergy JOIN. synergyskydb is the default database name.
Username	postgres	This is the default database username configured in the Synergy JOIN config.json file
Password	postgres	This is the default database password configured in the Synergy JOIN config.json file

## MCU / Bridge Configuration

This section allows you add privacy filter domains and all of the active MCU's that exist in the video environment. Synergy CONTROL supports CMS and Pexip MCU.

## Privacy Filter domains

Privacy Filter domains allow the video administrator to only view meetings that belong to certain domains. For example, if an organisation has three domains synergysky.com, synergysky.no and synergysky.net. The filter can be configured so that only the domains synergysky.com and synergysky.no are visible within the dashboard.

To add a domain to the list, click the 'Add Domain' button and type in the required domain including the suffix.

**BRIDGE CONFIGURATION**

---

**Privacy Filter domains**  
Only Active meetings with given VMR domains will be displayed

**Add Domain**

Domain	synergysky.com	Delete Domain	
Domain	synergysky.no	Delete Domain	

In the “**Bridge Configuration**” section, you can configure which MCUs Synergy CONTROL should gather data from. Select the MCU type and click '**Add Bridge**', then fill out the Name (name of the bridge for your internal use), Hostname, Username and Password

Cisco CMS ▼

Add Bridge

### CMS MCU

Disabled

Type: Cisco CMS

Name

Hostname

Username

Password

Test Connection

Discover Nodes

Delete Bridge

**If a bridge needs to be deactivated, tick the 'Disabled' checkbox.**

The Test Connection button can be used to verify that the correct username and password has been entered. For CMS the **Discover Nodes** button is available. This will attempt to detect whether this MCU is part of a cluster, and will add the other cluster nodes to the system. If the password for the other cluster nodes is different from this node the passwords must be filled out.

For **CMS** systems to get meeting locking to work it is important to setup “guest” and “host” accounts where for a guest the 'needsActivation' parameter has to be set. Refer to the CMS documentation for more information on how to set this.

### Pexip MCU

Disabled	<input type="checkbox"/>
Type:	Pexip
Name	<input type="text" value="Infinity"/>
Hostname	<input type="text" value="https://192.168.2.2"/>
Username	<input type="text" value="admin"/>
Password	<input type="password" value="....."/>
Reverse proxy / Conference node <small>(Pexip term, the node will be used for changing a conference layout)</small>	<input type="text" value="http://webrtc.example.com"/>

In the Pexip MCU configuration a new field has been added which represents the "Reverse proxy/Conference node". In Synergy CONTROL this node will be used to apply changes on a conference layout.

## Ongoing Meetings

Ongoing meetings are meetings that have started and there is at least one participant currently in the video meeting. Both Upcoming and ad-hoc meetings can appear in the active meetings tab.

This tab displays all meetings that are currently active. The meetings in this list are automatically updated by default. This means that new and completed meetings will automatically appear and disappear from the list.

This list displays information relating to the ongoing meeting such as the meeting name, meeting start time and the meeting type.

The screenshot shows a meeting details page for '2001: A Space Odyssey'. Key information includes: Meeting start: 2019-09-17 10:05:00, Scheduled duration: 00:30:00, Active duration: 00:08:16, Participants: 1 / 2, Meeting type: Scheduled / OneTimeVM. The organizer is Aleksandar Sunjic. The dial-in URI is 9000@synergysky.com. There are buttons for 'Extend meeting' and 'Share details'. A 'Scheduled resources' section shows 'ad.demo2.c'. An 'Invites' section shows email addresses 'as@synergysky.com' and 'em@synergysky.com'. A table at the bottom lists participants, with one participant named 'alexashoo' from 'Oslo' who is 'incoming' and connected at '2019-09-17 10:12:29'. Participant controls for this user include mute, video, and chat icons.

### Example Scenarios:

- If a meeting is Upcoming but not yet started it will be shown only in Upcoming meetings tabs.
- When the meeting starts, it will be shown in Ongoing meetings list only.
- If user favorites a meeting then it will be shown in the Favorites list and either the Upcoming meetings or active meetings list depending on if the meeting has started.

The below table details the control meeting information fields:

Section/Field name	Description
Meeting Name	The given name of the meeting
Meeting Start	The given start time of the meeting
Scheduled Duration	The scheduled duration of the meeting . This field is only populated with information in the Upcoming meetings window.
Active Duration	The active duration of the meeting. This field is only populated with information in the Ongoing meetings window.
Participants	The number of participants that have been invited to the meeting. When looking at this in the 'Ongoing Meetings' view, there is a delimitator showing how many participants where invited cont compared to how many participants are present
Meeting Type	The type of meeting the user is currently viewing. The meetings types are Ad-hoc meetings or scheduled meetings.

### Ad-hoc Meeting

Ad-hoc meetings are meetings that have not been scheduled. These meeting types will **only** appear in the 'Ongoing' meetings tab when they are active. (They can also appear in the favorites tab if the meeting has marked as a favorite). There is no metadata for these meetings because they have not been registered in Synergy JOIN. **Ad-hoc meetings can only be ongoing** because they do not exist before they start.

### Inactive Meeting

Inactive meetings are Upcoming meetings that are registered by Synergy JOIN where metadata is displayed but the meetings have not yet started. Only scheduled meetings can be inactive

Advanced meeting criteria fields:

Section/Field name	Description
Name	The name of the organizer as they are described in the meeting invitation
URI	The Dial string that can be used to join the meeting manually
Location	The MCU Location of the meeting

Section/Field name	Description
Call Direction	Details whether the call is incoming or outgoing from the MCU
Connected at	The date and time the participant joined the call
People Counter	People counter information is only available if the video meeting equipment/end-point has people counter technology implemented/configured. The People Counter field shows the number of participants that are sitting in front of a video conferencing unit. This number will be updated every few seconds until the end of the meeting.
Duration	The amount of time the participant has been in the meeting

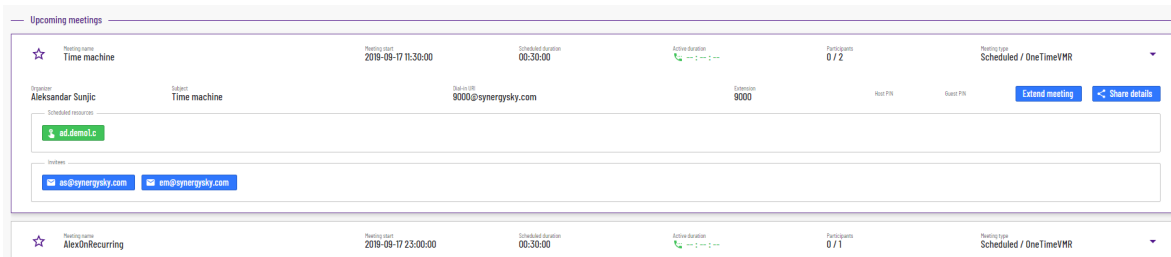


## Upcoming Meetings

A meeting can be **scheduled** by inviting participants using Outlook or Google calendar, which will be registered by Synergy JOIN if integration exists, but if an organization does not have Synergy JOIN installed (or for some reason the connection fails), Upcoming meetings will not be shown in the Synergy CONTROL tabs. Schedules Meetings can appear in both the active and inactive meetings tabs. (They can also appear in the favorites tab if the meeting has marked as a favorite).

This tab displays all Upcoming meetings whether they are active or inactive. All Upcoming meetings saved by Synergy JOIN will be displayed in this tab (please pay attention that pagination is applied and it may be necessary to scroll down to see all meetings ). The meetings in the list are automatically updated by default. This means that new and completed meetings will automatically appear and disappear from the list, respectively.

How long in the future Upcoming meetings are going to be displayed is defined by the calendar or scheduling tool itself. When Synergy JOIN is started for a first time, it will try to fetch all scheduled meetings in a time window defined by calendar applications.



### Example Scenarios:

- If a meeting is Upcoming but not yet started it will be shown only in Upcoming meetings tabs.
- When the meeting starts, it will be shown in Ongoing meetings list only.
- If user favorites a meeting then it will be shown in the Favorites list and either the Upcoming meetings or active meetings list depending on if the meeting has started.

The below table details the control meeting information fields:

Section/Field name	Description
Meeting Name	The given name of the meeting
Meeting Start	The given start time of the meeting
Scheduled Duration	The scheduled duration of the meeting . This field is only populated with information in the Upcoming meetings window.
Active Duration	The active duration of the meeting. This field is only populated with information in the Ongoing meetings window.
Participants	The number of participants that have been invited to the meeting. When looking at this in the 'Ongoing Meetings' view, there is a delimitator showing how many participants where invited cont compared to how many participants are present
Meeting Type	The type of meeting the user is currently viewing. The meetings types are Ad-hoc meetings or scheduled meetings.

### Inactive Meeting

Inactive meetings are Upcoming meetings that are registered by Synergy JOIN where metadata is displayed but the meetings have not yet started. Only scheduled meetings can be inactive

Metadata and control enabled by the Synergy JOIN integration

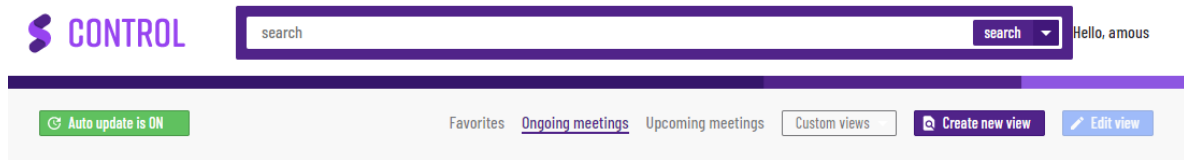
Section/Field name	Description
Organizer	The name of the organizer as they are described in the meeting invitation
Subject	The given name of the meeting
Dial-in URI	The Dial string that can be used to join the meeting manually
Extension	The meeting extension excluding the URI domain
Host PIN	The specified pin host/organiser should use to join the meeting

Section/Field name	Description
Guest PIN	The specified pin guests can use to join the meeting
Extend meeting	Allows the administrator to extend the meeting by x number of minutes
Share details	Allows the administrator to share the meeting information with additional participants.

## Custom Views

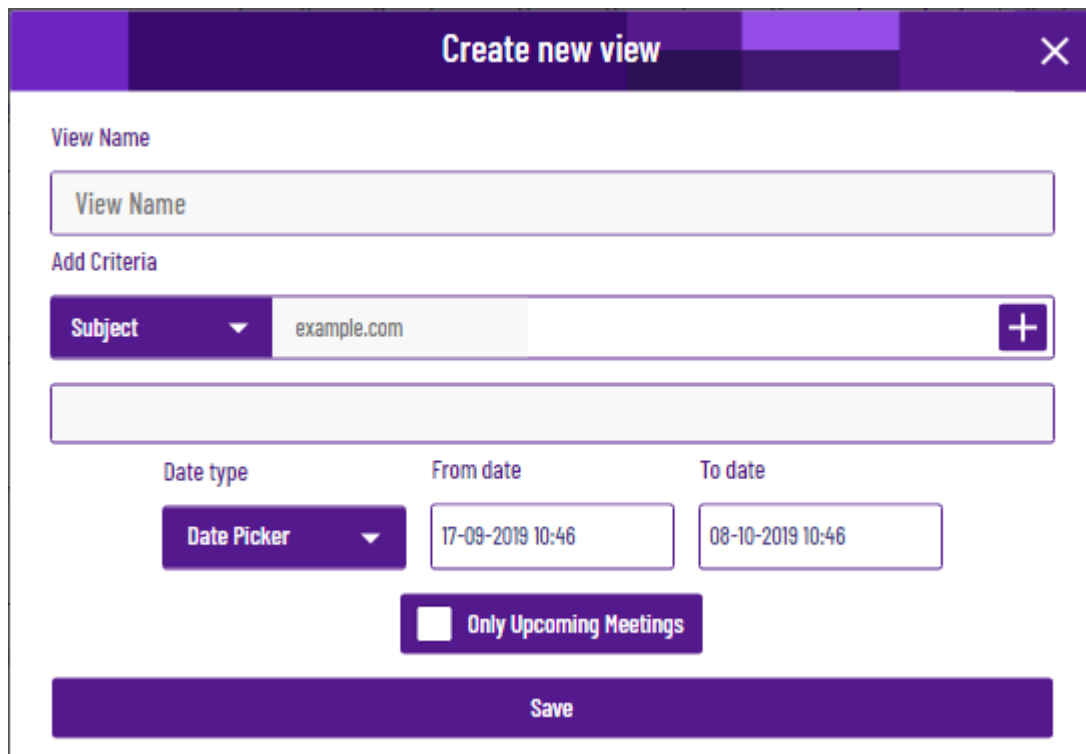
Custom views in CONTROL can be created based on a variety of filters such as the meeting owner, meeting subject, invitee, meeting room, dial-in uri, active meeting participants or meeting date range. All users of Synergy CONTROL can create their own Custom views, which are saved on client machines.

Custom view lists are created in such a way that all given criteria are met. Unlike the Search feature, where the search is executed once and the state of the meetings is actively updated, Custom view lists are continuously updated according to chosen criteria. This also includes the state of the meetings themselves.



### Creating Custom Views

To create a custom view you have to click on the 'Create new view' Option in the controls tab. Once you click on this button, you will be presented with the 'Create new view' window.



If a date type 'Relative date' is chosen, Synergy CONTROL will use the 'From date as a reference. This will be set on date 'Now' every day, and create 'To date' by adding a certain number of days which depends on the chosen option or 'tomorrow', 'one week', 'two weeks', etc.

#### Create New View Window

Section/Field name	Description
View Name	Free text field to type in the given name of the view
Add Criteria	The defined criteria that you would like the view to be created with
Date Type	The date field can be defined as a Relative Date (Date Range) or you can define a date range use the 'Date Picker'
Only Upcoming meetings	This will only include Upcoming meetings in this view
Save	This will save the entered options and create the custom view

Once you have selected your criteria, Click 'Save' and your new custom view will be visible from the 'Custom Views' button in the controls tab.

Within the custom view, the applied criteria is visible at the top of every each custom view list.

PROFILE: Important, SUBJECT: VMR, FROM: 2019 - 09 - 17 10:46:56, TO: 2019 - 10 - 08 10:46:56, RELATIVE DATE: NO, ONLY SCHEDULED:NO

— Ongoing meetings —

Meeting name	Meeting start	Scheduled duration	Active duration	Participants	Meeting type
Alex's VMR	2019-09-17 10:47:45	N/A	00:09:12	1 / 0	Ad-Hoc / Pexip
Tor Halvorsen's VMR	2019-09-17 10:52:19	N/A	00:04:39	2 / 0	Ad-Hoc / Pexip

— Upcoming meetings —

Currently there are no Upcoming meetings which meets given criteria. If this Custom view stay active, the state can be changed.

## Edit Custom View

To edit a custom view, click on the 'Edit view' button in the controls tab.

When you Edit a view, you are not able to change the view name, however you can change the criteria that the view is populating with.

To delete a custom view, click on the red 'bin' icon next to the Save button.

**Edit view Important**
✕

**View Name**

**Add Criteria**

Owner

example.com

+

Owner: as@synergysky.com
✕

Room: mars
✕

Subject: VMR
✕

Date type

Date Picker
▼

From date

To date

**Only Upcoming Meetings**

**Save**
✕

The Custom view 'Add Criteria' section controls the majority of filters for your custom view. Below you will find the list of these criteria along with how they can be used.

### Custom View Criteria

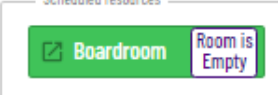
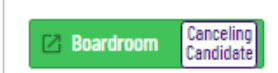
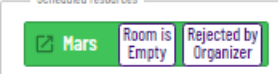

Section/Field name	Description
Subject	The subject line or a string within the meeting subject line. This field can only be used once in the search criteria
Dial-In URI	The Dial-In URI of the meeting. There can only be one URI associated with a custom view
Owner	The owner of the meeting. There can only be one owner associated with a custom view

Section/Field name	Description
Invitee	Users that have been invited to the meeting. You can filter the meetings in this list with multiple invitees
Room	Room resources that have been invited to the meeting. You can filter the meetings in this list with multiple room resources
Participant	Participants that have been invited to the meeting. You can filter the meetings in this list with multiple participants. This field only works for Ongoing MCU meetings.

# Synergy of Things

Synergy CONTROL is able to utilize sensor information to display the booking and occupancy status for all meeting room resources involved in a Scheduled meeting. Synergy CONTROL requires connection to your Synergy JOIN installation to be able to present people count and sensor information sent from IoT provider Verithings. Sensor information is displayed dependent on the rooms and/or video systems being equipped with the supported sensors and the correct configuration being applied. Configuration information can be found [here](#)

There are four types of flags that can be displayed depending on the room status and information received from the sensor.

<p><b>Room is Empty</b></p> <p>Scheduled resources</p> 	<p>When a room camera or other type of sensor does not detect any presence in a room, this flag will be shown. The resource will then transition into the state 'Canceling candidate', when configured "buffer time" expires and the room is still empty.</p>
<p><b>Canceling Candidate</b></p> <p>Scheduled resources</p> 	<p>If a meeting resource is shown with this type of flag, it means that it will be "unbooked" or "freed" to be booked again. How long the resource will stay in this state depends on how the unbook function has been configured in Synergy JOIN</p>
<p><b>Rejected by Organizer</b></p> <p>Scheduled resources</p> 	<p>When a resource is in the 'Canceling Candidate state', an email will be sent to the meeting organizer to inform them that the room will be released soon. If the organizer does not click on a specific link in the email, the resource will be unbooked. On the other hand, if the organizer chooses to keep all resources (or the booked meeting), Rejected by Organizer flag will be displayed.</p>
<p><b>Room is canceled</b></p> <p>Scheduled resources</p> 	<p>This is another transition from Canceling Candidate state and it happens when the meeting organizer does not react to the email they will have received about releasing a resource (the organizer did not reject the cancellation).</p>

# Meeting Controls

## Group Controls

Group controls are only available from the Active Meetings tab. Group controls give the administrator control over sound, video and microphone for all participants with a click of a button. Group control also allows the administrator to invite participants to the meeting using a URI.



Group controls (from left to right)

Dial-Out to Participant, Meeting Layout, Mute all Microphones, Turn Off All Cameras, Turn Off Sound for all, Meeting Lock, Show/Hide group controls.

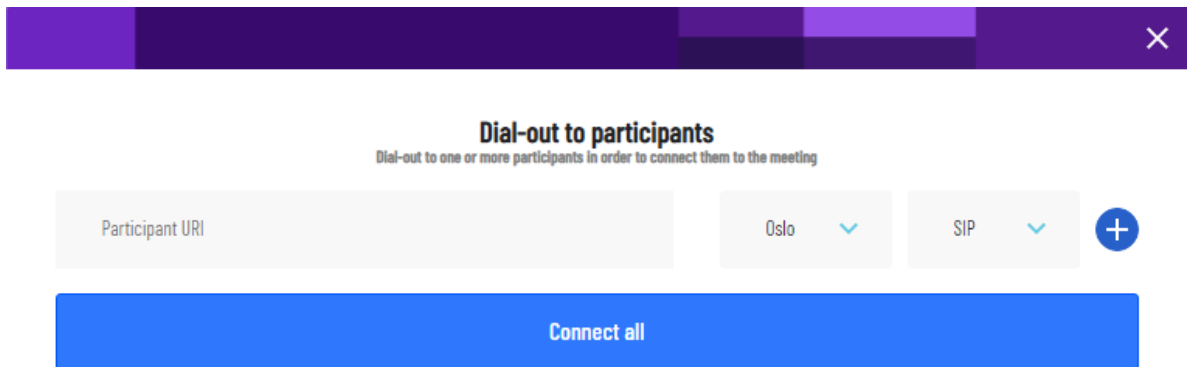
Communication with the server happens asynchronously and it may happen that a command will not be applied immediately but shortly after a click. Some controls are not available on both Cisco CMS and Pexip Infinity, please check [limitation section](#). If any controls are not available for a meeting type, these controls will be grayed out as per the above image.

It is possible to apply group controls to turn off sound, video and microphone on all participants but **it is not possible to turn on sound and video for all participants**.

## Dial-out to participant

Dial-out to a participant is accomplished using MCU capabilities depending on where the meetings is being hosted.

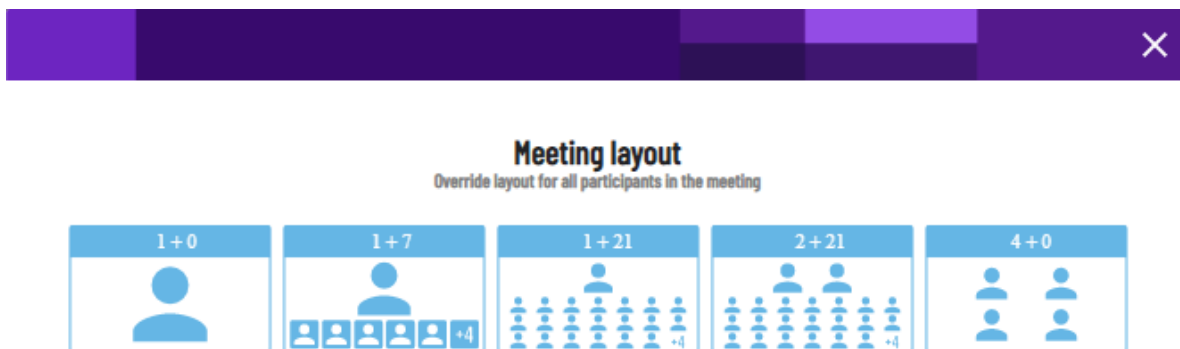
Administrators will have to choose the location (based on which MCU is hosting the meeting) and the protocol to dial out to a participant. The available protocols are SIP, H323, Lync/MS-SIP, RTMP and Google Hangouts Meet. Once all of the information has been entered, they will have to click on the 'Connect All' button to connect the participants to the meeting.



The call will placed to the video room or user’s end-point.

## Meeting Layout

There are several different layouts available for all meetings depending on the MCU that is being used for the meeting. The applied layout will affect all participants in the meeting. A layout is set on a Virtual meeting room or Co-Space level.



You can hover over each meeting layout for a description of the layout style before applying it to all participants in the meeting.

## Participant Controls

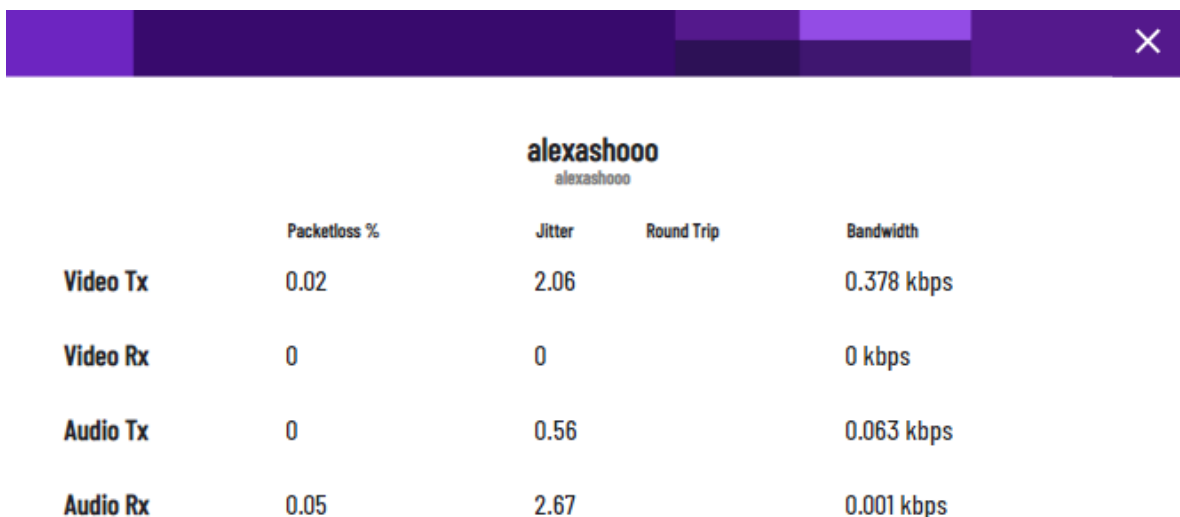
Participant controls refer to a specific participants meeting configuration. It is possible to turn on or off a participant’s video, sound and microphone, disconnect a participant and also check network data and connection quality for the participant. Some controls are not available on CMS and Pexip Infinity. Further information can be found in the [limitations section](#).



Participant controls (from left to right)

Mute/Unmute Microphone, Turn Camera on/off, Turn Sound on/off, Show Participant’s Network Status, Disconnect the Participant.

**Unlike Group controls, Participant Controls are bidirectional. It is possible to turn on and off a participant’s assets.**

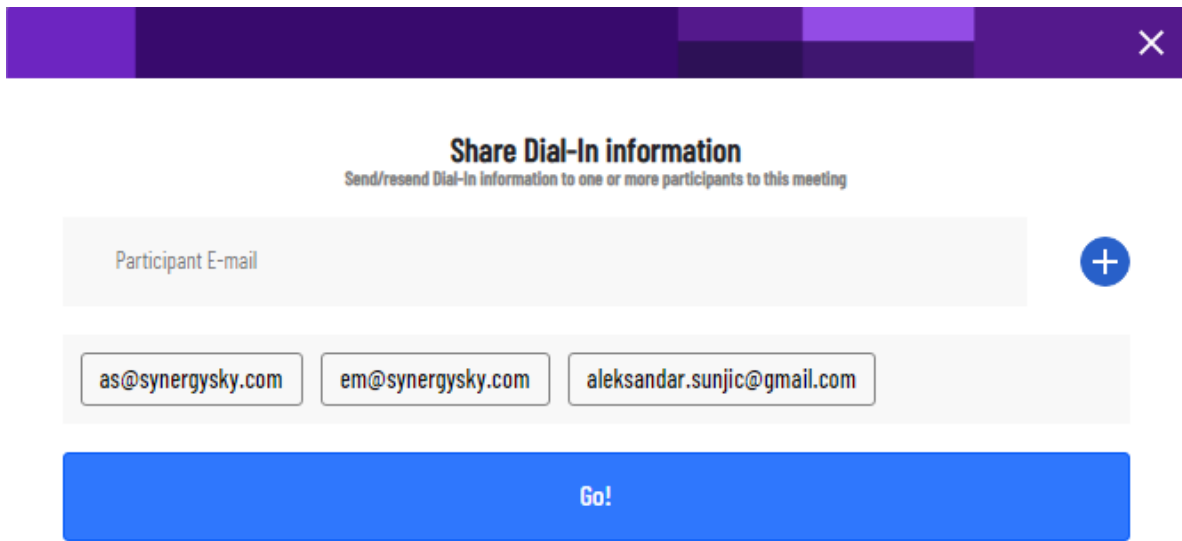


The above image shows a participants network status.



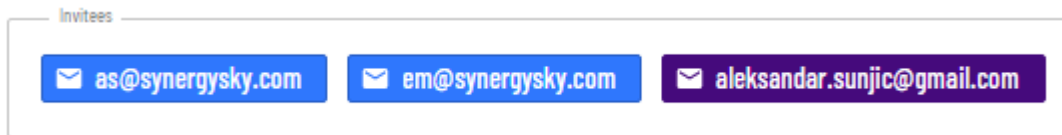
## Share Details

By using the 'Share details' button, the administrator can send dial-in information to scheduled participants using their email address.

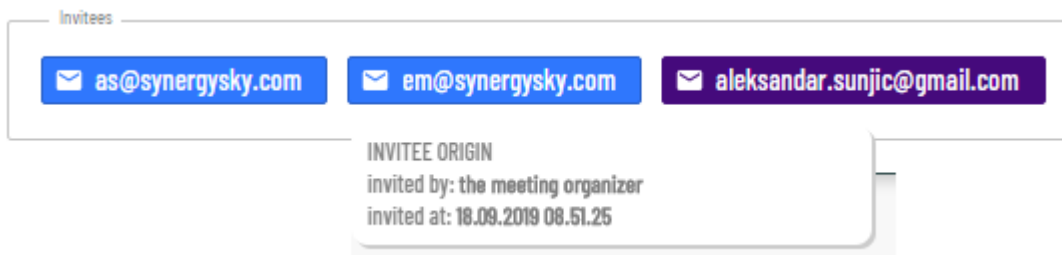


Invitees that are in a scheduled meeting processed by Synergy JOIN will automatically receive dial-in information from the meeting organizer. As described in the above image, it is also possible for an administrator to send dial-in information to participants. If an attendee has received dial in information from a meeting organizer, the color of the box with their details will be different to when they have been invited to a meeting by an administrator.

The participant that received dial-in information from the meeting organizer is on the left and the participant that received they dial-in information from an administrator is on the right.



It is also possible to hover over each participants email address to view additional information such as how they where invited and at what time they where invited.



## Extend Meeting

Synergy JOIN does VMR/CoSpace provisioning for booked and scheduled video meetings as well as deprovisioning when the scheduled meeting time has passed. This also includes the 'conference end buffer'(configured in Synergy JOIN). By default, this value is set to 10 minutes in Synergy JOIN.

When you extend a meeting, you are extending the deprovisioning time for a meeting which in turn keeps all of the participants active in the video meeting.

Clicking on **'Get Max Extension Time'** provides the video administrator with the maximum possible time to postpone the VMR for deprovisioning. This value is calculated on the next meeting that has been booked with the same VMR, minus the 'conference start buffer' value.

Clicking on 'Extend Meeting' Extends the meeting by the specified value.

**Extend meeting** ✕

Extending the meeting will postpone the VMR deprovisioning time. There will be no meeting changes in the calendar.

0

Max Extension Time: Unknown  
Minutes Until Next Meeting: Unknown

Get Max Extension Time      Extend Meeting

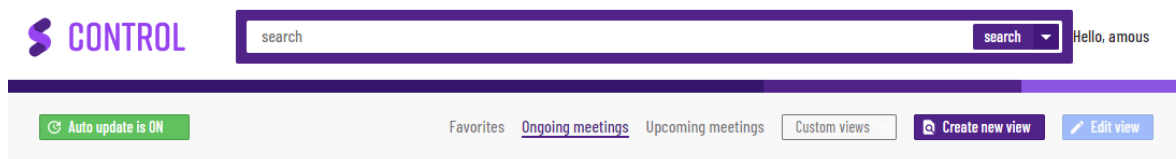
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## Link to a Scheduled Resource

The video end-point configuration page can be accessed by clicking on the 'scheduled resource' button in an upcoming or ongoing meeting. By clicking on the button, a new tab will be opened in the browser leading to the video endpoint configuration page. If for some reason the resource configuration page is not available, a warning message will be displayed

## Tab Controls

In the CONTROL tabs, you are able to see a list of meetings according to their current state or user's actions. User's actions refer to favoriting a meeting, searching for a meeting or creating a custom view. The Search Results and Favorites tabs do not appear unless either a favorite is chosen or a search is made.



**All controls which depend on a meeting state are available in all tabs where a meeting is listed, and it is possible to control the meeting in the same way across the tabs.**

## Auto Update

It is possible to turn off auto-update on meeting lists. This feature is implemented to prevent vertical movement in the meetings lists when new meetings occur or completed meetings are removed. To turn off auto-update, the switch should look like the below.



When **auto-update is OFF**, completed meetings will be marked by being a lighter (dimmed) color compared to the other meetings in the list. New meetings will not be displayed in the list until auto-update is turned back on. There will be a message shown when any changes to the list are detected.

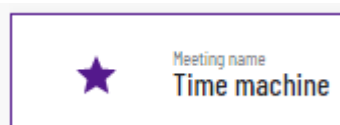
It is important to know that even if auto-update for meeting lists (or all tabs) is OFF, everything that happens within a meeting, like participants been connected or disconnected or sound been muted, it will still work as normally or it will be updated after a few seconds.



To turn meeting auto-update on, the setting has to be set to ON.

## Favorites

This tab is only visible when a user favorites a meeting. You can favorite a meeting by clicking on the fairytale button on the left hand side of an Ongoing or Upcoming meeting



References to the favorited meetings are saved in the web browser so the list will be regenerated if the browser is closed and reopened. This list is only able to display ongoing and/or Upcoming meetings but not completed meetings .

Updating of the Favorites and Search works automatically by default. The only difference in functionality compared to the Ongoing and Upcoming lists is that a user can add new meetings to the lists, either by favoriting a meeting which will be shown in Favorites or by searching for a meeting will be shown in Search results. If a meeting is completed it will be removed from all lists.

## Search

This tab is only visible when a search is performed and can be removed by clicking on the "Clear search" button. It is possible to search meetings by name, meeting state (ongoing or upcoming), meeting start and end date as well as participants name & email address.

You can also search for meetings using the URI of the meeting or the organizers name.

search search ▲

---

**Meetings**

Ongoing meetings

Upcoming meetings

**Date / Time**

From: 17-09-2019 00:00

To: 17-09-2019 23:59

Meeting name	Meeting start	Scheduled duration	Meeting start	Meeting type
Jari Ävall -	2019-09-17 10:00	N/A	00:54:22	Ad-Hoc /